

#### Article

# Barriers to green product purchase intention among social media users: A descriptive qualitative study

Ignasius Heri Satrya Wangsa<sup>1,\*</sup>, Chung-Sin Yoon<sup>2</sup>

<sup>1</sup> Department of Management, Faculty of Business & Accounting, Musi Charitas Catholic University, Palembang 30113, Indonesia <sup>2</sup> Alan Yoon Associates Chartered Accountants, Kuala Lumpur 50450, Malaysia

\* Corresponding author: Ignasius Heri Satrya Wangsa, ig heri@ukmc.ac.id

CITATION

Wangsa IHS, Yoon CS. (2024). Barriers to green product purchase intention among social media user: A descriptive qualitative study. Journal of Infrastructure, Policy and Development. 8(10): 4442. https://doi.org/10.24294/jipd.v8i10.4442

#### ARTICLE INFO

Received: 15 May 2024 Accepted: 20 June 2024 Available online: 20 September 2024





Copyright © 2024 by author(s). Journal of Infrastructure, Policy and Development is published by EnPress Publisher, LLC. This work is licensed under the Creative Commons Attribution (CC BY) license. https://creativecommons.org/licenses/ by/4.0/ Abstract: Participation in the implementation of green values that are becoming a global norm often experiences challenges. In response with trends of social media use, a study of barriers to green product purchase intention among social media users is conducted. By descriptive qualitative approach, three keywords are employed, namely: (1) "barriers to green consumption"; (2) "barriers of purchase intention; and (3) "social media use and barriers to green consumption". The findings reveal: (1) the study of barriers to green product purchase intention among social media users has been gaining importance for future research; (2) the potential future research area includes: (a) the level of belief in green products purchase intention that explains the rationalization of green consumption (green knowledge); and (b) the use of digital media through the role of social media in promoting green consumption (green promotion). The theoretical implication emphasizes contribution to the theory of sustainable marketing, namely barriers as dynamics of market interactivity that are capable of generating responsiveness leading to business competitiveness. While practical implication is shown in business efforts to transform challenges into opportunity.

Keywords: social media; purchase intention; green products

#### 1. Introduction

Digital era is characterized by an increase in the number of internet users worldwide. Data from Statista (Statista, n.d.) states that the number of internet users worldwide as of 2022 reached 5.3 billion users, equivalent to 66% of global population. The increasing rate of internet users compared to 2021 (4.9 billion users) reached 0.2 million users.

The high number of internet users worldwide was followed by an increase in the number of active social media users in 2022, which accounted for 4.59 billion users. The increase is projected to almost 6 billion users in 2027 (Statista, n.d.).

The growing participation of social media users in activities that involve the exchange of information is evidence of the popularity of social media platform, which enables the accumulation of knowledge (Cleveland, 2016; Pokrovskaia et al., 2021). Through activities such as posting opinions, responding to comments, and sharing ideas that attract the attention of other users to engage in discussions, the interactivity space of social media brings users together to exchange information. In this interactive space, a system of exchange and dual role of information seeking and sharing is developed (Abbas et al., 2022; Lin and Wang, 2022).

As social media offers learning mechanism that might broaden "green" insights (Cleveland, 2016) i.e., knowledge that should be put into practice to express environmental concerns, this often has conflict with consumer's belief. Within this

perspective the conceptualization of barriers to green consumption has emerged, and the comprehensive study that would give theoretical support on barriers to green product purchase intention among social media user is necessary (Singh et al., 2022).

The research trend related to green product purchase intention and social media users (Rejeb et al., 2022) is presented in **Figure 1** below.



**Figure 1.** Green product purchase intention and social network. Source: VOSviewer (n.d.). Keyword "green product purchase intention".

From the keyword "green product purchase intention" it is shown that "green product purchase intention" is in the same cluster with "social network". Further, the following **Figure 2** shows research interest in green product purchase intention has been growing since 1999.



Figure 2. Main information.

Source: Biblioshiny (n.d.). Keyword "green product purchase intention".

The results reveal 707 Scopus-indexed articles were published from 1999 to 2023, from 302 sources. The number of authors involved in this topic is 1858 with 40595 references. International co-authorship also grows at 21.78%. It shows the comprehensive study that would give theoretical support on barriers to green product purchase intention among social media users is necessary.

The authors propose research novelty from the perspective that green orientation

is imperative for business. While market seems to encounter barrier to green consumption, businesses has to achieve competitiveness i.e., the development of business capability to respond market. This research intend to argue that the keyword "barrier" need to be explored together with "the phenomena of social media use" (Gao et al., 2022; Liu et al., 2021; Nekmahmud et al., 2022; Rodrigo and Mendis, 2023; Xue and Liu, 2023).

#### 2. Literature review

Barriers occur as intervention in the process of consumer purchasing decision, namely the conflict between beliefs and external pressures, both from the stimulus of marketing efforts and social influences (Gleim et al., 2013; Gupta and Ogden, 2009). In the consumption of environmentally friendly products, barriers take place when consumers are challenged by a conflict between existing value and newly adopted value. Previous research explains the concept of inconsistency in green product consumption, namely consumers who tend to be inconsistent in making choices to buy green products. What is believed to be true values embedded in attitudes cannot be fully put into practical values (Duong, 2022; Sun and Wang, 2020). This inconsistency which is referred to as attitude-behavior inconsistency could explain the manifestation of barriers (Balderjahn, 1988; Hines et al., 1987) Barriers tend to lead one's being inconsistent with what he believes.

Gleim et al. (2013) investigate the barriers that prevent consumers from engaging in green consumption, despite increasing awareness and concern for environmental issues. Several key factors that contribute to consumer resistance to purchasing environmentally friendly products are perceived high cost, doubt about product effectiveness, limited availability and convenience, lack of information and awareness, perceived sacrifice in quality, habits and inertia, social influence and norms, and trust issues.

Kleijnen et al. (2009) explain the tem "barriers" as the factors that prevent consumers from adopting new products, services, or technology. There are three main factors in the barriers to innovation, namely: (1) behavioral factors (habit, perceived risk, cognitive dissonance); (2) product-related factors (complexity, compatibility, and perceived value); and (3) socio-cultural factors (social norms, peer influence, cultural values). While Gupta and Ogden (2009) emphasize a social dilemma perspective on green buying. The term "barriers" refers to the various obstacles that prevent consumers from engaging in environmentally friendly purchasing behaviors. The social dilemma perspective highlights the tension between individual convenience and cost savings versus collective environmental benefits. Consumers may choose to prioritize immediate personal benefits over long-term collective gains.

While green norm, i.e., global norm which is directed to environment sustainability, could have benefit to human life (Liu et al., 2020); some might have little understanding that the benefit refers to consequences of one's satisfaction. It is known that satisfaction is about to meet with one's self-interest, rather satisfaction that has impact to others. Therefore, the barriers are determined by the efforts to satisfy one's self-interest. This perspective leads to the research proposition that the increasing number of social media users served as the fact that people should be socially more connected and be able to transform one's self-interest to satisfaction that has impact to others.

#### 3. Methods

This research uses descriptive qualitative approach through a keyword-assisted data mining (Mishra et al., 2022) with a focus on barriers i.e., barriers to green product purchase intention among social media users. This approach allows to process and analyze large volumes of data efficiently, uncover patterns and correlations that might not be immediately evident related to "barriers".

The scope of the research is determined to effectively meet with the purpose of the study, and to assure clear contribution in dealing with green global norm. As little study has been conducted specially in the integration of social media use and barriers to green consumption; it is necessary to provide sufficient theoretical foundation through this study. The collected data are articles taken from Scopus-indexed international and reputable journal written in English in the field of marketing and consumer behavior.

Three relevant keywords are used, namely: (1) barriers to green consumption; (2) barriers of purchase intention; and (3) social media use and barriers to green consumption. The three relevant keywords are employed in two stages of descriptive qualitative process.

- Stage 1: Two articles were selected from Scopus database using two keywords "barriers to green consumption" and "barriers of purchase intention". Criteria for the selected article is Q1 Scopus indexed international journal articles with relatively higher h-index. They are: (1) Against the Green: A Multi-method Examination of the Barriers to Green Consumption; and (2) Investigating the Determinants and Barriers of Purchase Intention of Innovative New Products. Next, the two articles were explored by Connected Papers to identify Prior Works and Derivative Works (Appendix **Table A1**). Finally, the authors use Atlas.ti to analyze all articles related to Prior Works and Derivative Works.
- Stage 2: Data mining procedure using the keyword of "social media use" or "barriers to green consumption" is implemented. The authors use VOSviewer and Biblioshiny to identify trend of conceptual development (Aria and Cuccurullo, 2017) of barriers to green product purchase intention among social media users.

The two stages can be explained using the framework of green product purchase intention among social media users as shown in the following **Figure 3**:



**Figure 3.** Stages in descriptive qualitative approach.

Source: Developed by the authors.

#### 4. Results and analysis

#### 4.1. Stage 1

# 4.1.1. Main article 1—Against the green: A multi-method examination of the barriers to green consumption (Keyword-1 "barriers to green consumption")

The article explains that higher price of green products is considered as one of the most significant barriers to green consumption. It reveals that many consumers are skeptical about the effectiveness and benefits of green products. They doubt whether these products perform as well as their non-green counterparts, leading to reluctance in switching to eco-friendly options. The study also highlights that green products are not always readily available in mainstream retail outlets. Limited accessibility and convenience issues make it difficult for consumers to access green products regularly. The research suggests that overcoming these barriers requires addressing price concerns, improving product accessibility, increasing consumer awareness, ensuring that green products meet quality and performance standards, and fostering social norms that support green consumption.

#### Connected papers output (1): Prior works

Nine articles were presented by Connected Papers. They were classified as Prior Works and derived through keyword "barriers to green consumption". Further, the articles are processed using ATLAS.ti. Out of nine articles, only five of them can produce construct cluster through wordcloud (Appendix **Table A3**).

Table A3 shows the social dimension on environmentally friendly behavior. In particular, the context of social influence and environmentally friendly behavior also involves psychological factors. Environmentally friendly behavior influenced by social pressure is represented through the word "socially conscious". This environmentally friendly consumer is hereafter referred to as an ecological consumer.

Ecology in the context of ecological consumers can be explained as environmentally oriented consumptive activities. Orientation is shown through social sensitivity, namely concern for environmentally friendly values that apply in a specific social environment. The concept of business social responsibility is formed through ecological consumers, where businesses have a commitment to the environment because of the demands of the ecological market environment. Business relations with its market are oriented towards environmentally friendly values. This is also a resource for environmentally oriented performance, and the basis for the conceptualization of green performance.

#### Connected papers output (2): Derivative works

There were four Derivative Works-related articles generated using Connected Papers as presented in Table A4 (Appendix). Those articles explain environmentally friendly behavior (referred to as green behavior). These behaviors include consumer sustainable behavior. Perceived effectiveness is one of the important terms in the discussion of green behavior. Sun and Wang (2020) explain perceived consumer effectiveness (PCE), Duong (2022) refers to "conscientiousness", that affects attitude towards green product, but has no impact on purchase intention. The study also reveals the role of Social Media Marketing (SMM) as one of determinants in attitude towards green product (Sun and Wang, 2020). Mo et al. (2018) uses perceived effectiveness on self (PES) to predict consumers' support for the regulation of functional green ads. This perspective (Duong, 2022; Mo et al., 2018; Sun and Wang, 2020) describe barriers to green consumption as a lack of perceived effectiveness that can be exacerbated by misinformation on social media, leading consumers to doubt the impact of their green purchases. Similarly, skepticism fueled by conflicting social media messages can reduce the perceived effectiveness of green products, further discouraging their adoption.

Green behavior is related to the consumption of eco-friendly products. The innovativeness can be explained as the influence of innovation on the consumption of eco-friendly products. The innovative values of green products play an important part of the discussion on green product purchase intention behavior.

# 4.1.2. Main article 2—Investigating the determinants and barriers of purchase intention of innovative new products (Keyword-2 "barriers of purchase intention")

The article contains a study of purchase intention for innovative new products. The theories used are Theory of Reasoned Action (TRA) and Theory of Planned Behavior (TPB) which are integrated into Behavioral Reasoning Theory (BRT). Findings show the influence of value for change on reasons for adoption or non-adoption of new product. Reasons for adoption include: (1) relative advantage; (2) compatibility; and (3) simplicity. Meanwhile, the reasons for non-adoption are: (1) price barriers; (2) performance barriers; and (3) usage barriers. Therefore, this can be used to provide insights on the meaning of barriers in the context of innovative new products. While consumer's adoption is determined by product performance i.e., advantage, compatibility and simplicity of the product, but the performance could not go beyond what is perceived by consumer on price, performance and usage. Price, performance and usage that are below expectation might potentially trigger the barriers for the adoption.

#### Connected papers output (3): Prior works

There were six articles of Derivative Works revealed by Connected Papers. Out

of six articles, only four can be processed using ATLAS.ti to generate construct cluster in the word cloud as presented in Table A4 (see Appendix). The identified constructs explain the barriers of purchase intention within the perspective of: (1) technology use; (2) consumer susceptibility to innovation risk; (3) measurement model; and (4) behavioral interests. Technology refers to the technological complexity in which the advanced nature of new technology affects compatibility with existing systems. Previous research (Wang et al., 2023) shows green product innovation as one of green marketing domain. In this case the context of barriers to green consumption can be explained within the perspective of green marketing. This green marketing insight reveals the categorization of barriers into consumer-related issues, market-related challenges, and product-specific concerns. Consumer-related issues refer to consumer differences and their concern on marketing initiatives and consumer psychological feelings (Wang et al., 2023), consumers' perception (Song et al., 2022) or self-other effect perception (Liu et al., 2021; Mo et al., 2018), consumers' personality traits (Duong, 2022), and subjective norms (Liu et al., 2020). Market-related challenges and product-specific concerns are consumers' preferences on green product or green consumption sentiment of consumers (Wang et al., 2024). For example, in Wang et al. (2024) consumers prioritize appearance for clothing and home products, quality for food products, and service for travel products. In this context the basic attributes for green products are elaborated as quality, appearance, transformation, price, service, and brand. As product' attributes reflect value offerings, barriers to green consumption are consumers' mis-interpretation of green product's attributes i.e., when the consumers fail to treasure products' values.

Consumer susceptibility to innovation risk is related to innovation adoption resistance because of reliability, security and performance limitation. Insufficient understanding of market preference could lead the business to produce innovative products that are out of market expectation.

#### Connected papers output (4): Derivative works

Eight articles were presented as Derivative Works. Out of eight articles, four of them can be processed using ATLAS.ti to generate construct cluster in the wordcloud as shown in **Table A5** (see Appendix).

The identified constructs (Appendix **Table A5**) explain the conceptual development of the barriers of purchase intention namely: (1) risk perception; (2) environmental; (3) consumption; and (4) perceived value. Market has expanded towards perceived risk and value related to the consumption of environment-friendly products. In this context barriers can be explained as market dilemma whether environment-friendly products perform as well as conventional ones. High perceived risk can diminish the perceived value, making consumers less likely to buy these products.

#### 4.2. Stage 2

This stage was conducted through the search for international journal articles in the Scopus database. Keyword-3 "social media use" OR "barriers to green consumption" was used to explore the foundation of barriers to green product purchase intention among social media user. VOSviewer and Biblioshiny were employed. The productivity of the keyword "social media use" OR "barriers to green consumption" shown by all documents that were successfully revealed through Biblioshiny in the period 1989 to 2023 (Total no. of documents = 1946; Total no. of authors = 4986; Total percentage of international co-authorship = 24.2%). This data emphasizes the prospective future studies on social media use and barriers to green consumption which could treasure the theoretical view of barriers to green product purchase intention among social media users.

Concepts that connect "social media" and "green product purchase intention" with the keyword "social media use" OR "barriers to green consumption" are identified, respectively: (1) "social media sharing" and "green product perception" i.e., The sharing system can produce the accumulation of knowledge that will shape the perception of green products; (2) "social media marketing" and "green consumption intention"; (3) "social media platform" and "green brand loyalty" i.e., Social media marketing can capture the essence of green consumption interest while emphasizing the concept of green social media is a means for green word-of-mouth (WOM) marketing. This confirms the significant role of social media trends and green product market dynamics, especially when challenged by global agreement on accelerating the achievement of Sustainability Development Goals (SDG) programs by 2030 (Senbel et al., 2014; Zhao et al., 2022).

#### 4.2.1. Output Biblioshiny

Through the thematic map (Figure 4) nine clusters were obtained.



Figure 4. Thematic map.

Source: Biblioshiny (n.d.). Keyword "social media use" OR "barriers to green consumption".

Two clusters are in Quadrant-1 (top right), namely: (1) green computing, green manufacturing, manufacture (Cluster-1); and (2) energy utilization, energy efficiency, environmental impact (Cluster-2). Cluster-1 tends to be close to the vertical line of relevance degree (centrality), as well as towards the top which is interpreted as emerging topics of study. The concept of green sustainability values appears in Cluster-2 which emphasizes green computing and green manufacturing.

#### Most frequent words

**Figure 5** shows two words with high occurrence rates, respectively: (1) energy utilization (405); and (2) sustainable development (285).



Figure 5. Most frequent words.

Source: Biblioshiny (n.d.). Keyword "social media use" OR "barriers to green consumption".

While in the third place, the word "energy efficiency" (132) was found. Green consumption barriers are related to energy utilization, sustainable development, and energy efficiency. Energy utilization efficiency is one of the efforts to develop sustainability values, which in its application has the potential to raise barriers.

#### Authors production over time

**Figure 6** shows the output productivity of researchers related to the keyword "social media use and barriers to green consumption".



Figure 6. Authors production over time.

Source: Biblioshiny (n.d.). Keyword "social media use" OR "barriers to green consumption".

It shows the interest in the subject started in 2001. The popularity of the field of study began to appear around 2018 and reached its peak in 2020 to 2022. Interest of this study follows the dynamics of empirical issues including a higher level of attention to environmental issues. The high level of attention reflects concern about environmental problems that have not been resolved. Here the problem gap appears, becoming an opportunity to be resolved through further studies.

#### Source local impact

The results of the study on social media use and green consumption barriers (**Figure 7**) were mostly published in the Journal of Cleaner Production (Q1 Scopus-indexed international journal).



Figure 7. Source local impact.

Source: Biblioshiny (n.d.). Keyword "social media use" OR "barriers to green consumption".

This shows that the related field of study is very important, receiving attention from researchers globally, as well as being a global concern and trend for further studies.

#### Most relevant sources

Output from Biblioshiny (Figure 8) shows the most relevant sources which are mostly taken from reputable international journals i.e., Journal of Cleaner Production.



Figure 8. Most relevant sources.

Source: Biblioshiny (n.d.). Keyword "social media use" OR "barriers to green consumption".

Additionally, studies in related fields are gaining popularity. It has shown emerging interest among researchers. This also shows attention to continuously improving the quality of studies in an effort to provide theoretical support related to the keywords "social media use and barriers to green consumption".

#### Wordcloud

Based on the wordcloud (Figure 9), the main concepts related to green consumption behavior were found, namely: (1) Environmental impact; (2) Energy efficiency; and (3) Consumption behavior.



**Figure 9.** Wordcloud. Source: Biblioshiny (n.d.). Keyword "social media use" OR "barriers to green consumption".

The wordcloud also presents several supporting concepts that can be used to explain social media use and barriers to green consumption, including: (1) decision making; (2) green computing; and (3) economic and social effects. This is consistent with the thematic map (**Figure 4**) which includes these concepts in Quadrant-1.

#### 5. Conclusion

This theoretical study validates the relevance of the trend of barriers in the context of green consumption among social media users, having practical implications for business contributions to the Sustainability Development Goals (SDG) agenda through three basic concepts, namely: (1) individual internalization; (2) facilitation of social media tools; and (3) socio-economic aspects. Individual internalization and facilitation of social media tools are the level of confidence built through the accumulation process of information exchange in the social media use. Socio-economic aspects are dynamics of the choice challenged by normative values that rule in the space of specific social and economic values.

#### 6. Implication

Having seen trend of the study of barriers to green consumption within the frame of the increasing number of social media users and green global norm; this descriptive qualitative research could give two significant implications as follows:

#### **6.1.** Theoretical contribution

Barriers can be discussed within two perspectives, namely: (1) Trends in social media use (Perspective-1); and (2) Green global awareness (Perspective-2).

Trends in social media use have offered learning environment in which market has evolved into its capacity to produce green knowledge. In line with the accumulation of green knowledge, barriers occur when the market becomes increasingly critical (more rationalized) in evaluating green consumption. Each consumer has different characteristics in forming perceptions that will influence attitudes towards green products according to their level of green knowledge.

Green global awareness provides opportunities for green promotional strategies through social media. This nature of social media which accumulates market knowledge provides new green insights. Barriers in this context are business failures in educating market green behavior.

Through these two perspectives, the study of barriers to green consumption can contribute to the theory of sustainable marketing, namely barriers as dynamics of market interactivity that are capable of generating responsiveness leading to business competitiveness.

#### **6.2.** Practical implications

Two practical implications of this study on barriers could be described as follows: First, barriers have become a phenomenon in the digital era, showing the reality of increasing business competitiveness. The dynamics in barriers are market pressures that are increasingly changing rapidly. For businesses, this reality is a challenge that can be transformed into an opportunity. As business' dynamic capability grows it could control the market through new product development minimizing the barriers i.e., what might cause consumer's reluctance. Barriers are also reflecting the mechanism of consumer's learning. What might be barriers at the beginning, in the journey of consumption experience, could be ended in which consumers could enjoy what they expect from the product.

Second, trend in the study of barriers has indicated barriers as major component in the ecosystem of consumption experience. As part of the ecosystem business would need to develop strategic resources to be "tolerable" with the phenomenon of barriers. In other words, barriers might need to be "created" by business in such a way that consumers need to encounter dissatisfaction as part of learning experience in their journey of consumption experience.

Author contributions: Conceptualization, IHSW and CSY; methodology, IHSW; software, CSY; validation, CSY; formal analysis, IHSW; investigation, IHSW and CSY; resources, CSY; data curation, IHSW and CSY; writing—original draft preparation, IHSW; writing—review and editing, IHSW and CSY; visualization, CSY; supervision, CSY; project administration, CSY; funding acquisition, IHSW and CSY. All authors have read and agreed to the published version of the manuscript.

Conflict of interest: The authors declare no conflict of interest.

#### References

- Abbas, A. F., Jusoh, A., Mas'od, A., et al. (2022). Bibliometrix analysis of information sharing in social media. Cogent Business & Management, 9(1). https://doi.org/10.1080/23311975.2021.2016556
- Afzali, M., & Ahmed, E. M. (2016). Exploring consumer doubt towards local new products innovation and purchase intention. World Journal of Entrepreneurship, Management and Sustainable Development, 12(1), 2–17. https://doi.org/10.1108/wjemsd-05-2015-0022
- Ajzen, I. (1991). The theory of planned behavior. Organizational Behavior and Human Decision Processes, 50(2), 179–211. https://doi.org/10.1016/0749-5978(91)90020-T
- Anderson, W. T., & Cunningham, W. H. (1972). The Socially Conscious Consumer. Journal of Marketing, 36(3), 23–31. https://doi.org/10.1177/002224297203600305
- Aria, M., & Cuccurullo, C. (2017). bibliometrix: An R-tool for comprehensive science mapping analysis. Journal of Informetrics, 11(4), 959–975. https://doi.org/10.1016/j.joi.2017.08.007
- Atlasti. (n.d.). Available online: https://atlasti.com/ (accessed on 13 September 2023).

Balderjahn, I. (1988). Personality variables and environmental attitudes as predictors of ecologically responsible consumption patterns. Journal of Business Research, 17, 51–56. https://doi.org/10.1016/0148-2963(88)90022-7

Biblioshiny. (n.d.). Available online: http:// www.bibliometrix.org/home/ (accessed on 13 September 2023).

Chanda, R. C., Isa, S. M., & Ahmed, T. (2023). Factors influencing customers' green purchasing intention: evidence from developing country. Journal of Science and Technology Policy Management.

- Cleveland, S. (2016). Social media systems in the workplace: Toward understanding employee knowledge creation via microblogging within shared knowledge domains. Informatics, 3(3), 11.
- Davis, F. D., Bagozzi, R., & Warshaw, P. R. (1989). User Acceptance of Computer Technology: A Comparison of Two Theoretical Models. Management Science, 35, 982–1003. https://doi.org/10.1287/MNSC.35.8.982
- Duong, C. D. (2022). Big Five personality traits and green consumption: bridging the attitude-intention-behavior gap. Asia Pacific Journal of Marketing and Logistics, 34(6), 1123-1144.
- Fornell, C., & Larcker, D. (1981). Evaluating structural equation models with unobservable variables and measurement error. Journal of Marketing Research, 18, 39–50. https://doi.org/10.2307/3151312
- Gao, B. M., Liu, M. T., & Chu, R. (2022). Information disclosing willingness in mobile internet contexts. Asia Pacific Journal of Marketing and Logistics, 35(1), 108-129.
- Gleim, M. R., Smith, J. S., Andrews, D., & Jr Joseph Cronin, J. (2013). Against the green: A multi-method examination of the barriers to green consumption. Journal of Retailing. https://doi.org/10.1016/j.jretai.2012.10.001
- Gupta, A., Arora, N., Sharma, R., & Mishra, A. (2022). Determinants of tourists' site-specific environmentally responsible behavior: an eco-sensitive zone perspective. Journal of Travel Research, 61(6), 1267–1286.
- Gupta, S., & Ogden, D. T. (2009). To buy or not to buy? A social dilemma perspective on green buying. Journal of Consumer Marketing. https://doi.org/10.1108/07363760910988201
- Hines, J. M., Hungerford, H., & Tomera, A. N. (1987). Analysis and synthesis of research on responsible environmental behavior: A meta-analysis. The Journal of Environmental Education, 18, 1–8. https://doi.org/10.1080/00958964.1987.9943482
- Joshi, Y., Uniyal, D. P., & Sangroya, D. (2021). Investigating consumers' green purchase intention: Examining the role of economic value, emotional value and perceived marketplace influence. Journal of Cleaner Production, 328, 129638.
- Kinnear, T. C., Taylor, J. R., & Ahmed, S. A. (1974). Ecologically Concerned Consumers: Who are They? Journal of Marketing, 38, 20–24. https://doi.org/10.1177/002224297403800205
- Kleijnen, M. H. P., Lee, N., & Wetzels, M. (2009). An exploration of consumer resistance to innovation and its antecedents. Journal of Economic Psychology, 30, 344–357. https://doi.org/10.1016/J.JOEP.2009.02.004
- Lalicic, L., & Weismayer, C. (2021). Consumers' reasons and perceived value co-creation of using artificial intelligence-enabled travel service agents. Journal of Business Research, 129, 891–901. https://doi.org/10.1016/J.JBUSRES.2020.11.005
- Lin, X., & Wang, X. (2022). Towards a model of social commerce: improving the effectiveness of e-commerce through leveraging social media tools based on consumers' dual roles. European Journal of Information Systems, 1–18.
- Liu, M. T., Liu, Y., & Mo, Z. (2020). Moral norm is the key: An extension of the theory of planned behaviour (TPB) on Chinese consumers' green purchase intention. Asia Pacific Journal of Marketing and Logistics, 32(8), 1823-1841.
- Liu, M. T., Liu, Y., Mo, Z., & Ng, K. L. (2021). Using text mining to track changes in travel destination image: the case of Macau. Asia Pacific Journal of Marketing and Logistics, 33(2), 371-393.
- Liu, M. T., Xue, J., & Liu, Y. (2021). The mechanism leads to successful clickbait promotion in WeChat social media platforms. Asia Pacific Journal of Marketing and Logistics, 33(9), 1952-1973.
- Luo, X., & Bhattacharya, C. (2006). Corporate Social Responsibility, Customer Satisfaction, and Market Value. Journal of Marketing, 70, 1–18. https://doi.org/10.1509/jmkg.70.4.001
- Menguc, B., Ozanne, L. (2005). Challenges of the "green imperative": a natural resource-based approach to the environmental orientation-business performance relationship. Journal of Business Research, 58, 430–438. https://doi.org/10.1016/J.JBUSRES.2003.09.002
- Mishra, S., Pandey, B., & Shahi, S. (2022). Bibliometric analysis of studies done in culture, brand and purchase intentions in business management and accounting, social science and psychology. International Journal of Bibliometrics in Business and Management, 2(1), 42–66.
- Mo, Z., Liu, M. T., & Liu, Y. (2018). Effects of functional green advertising on self and others. Psychology & Marketing, 35(5), 368-382.
- Nekmahmud, M., Naz, F., Ramkissoon, H., & Fekete-Farkas, M. (2022). Transforming consumers' intention to purchase green

products: Role of social media. Technological Forecasting and Social Change, 185, 122067.

- Pokrovskaia, N. N., Leontyeva, V. L., Ababkova, M. Y., et al. (2021). Digital communication tools and knowledge creation processes for enriched intellectual outcome—experience of short-term E-learning courses during pandemic. Future Internet, 13(2), 43.
- Rejeb, A., Rejeb, K., Abdollahi, A., & Treiblmaier, H. (2022). The big picture on Instagram research: Insights from a bibliometric analysis. Telematics and Informatics, 101876.
- Rodrigo, A., & Mendis, T. (2023). Impact of social media influencers' credibility on millennial consumers' green purchasing behavior: a concept paper on personal and social identities. Management Matters, 20(2), 134-153.
- Scopus (n.d.). Available online: https://www.scopus.com/ (accessed on 13 September 2023).
- Senbel, M., Ngo, V. D., & Blair, E. (2014). Social mobilization of climate change: University students conserving energy through multiple pathways for peer engagement. Journal of Environmental Psychology, 38, 84–93. https://doi.org/https://doi.org/10.1016/j.jenvp.2014.01.001
- Siddique, M., Saha, G., & Kasem, A. R. (2020). Estimating green purchase behavior: an empirical study using integrated behavior model in Bangladesh. Journal of Asia Business Studies. https://doi.org/10.1108/jabs-04-2019-0120
- Singh, U. S., Singh, N., Gulati, K., et al. (2022). A study on the revolution of consumer relationships as a combination of human interactions and digital transformations. Materials Today: Proceedings, 51, 460–464.
- Sohn, S., Groß, M. (2020). Understanding the inhibitors to consumer mobile purchasing intentions. Journal of Retailing and Consumer Services, 55, 102129. https://doi.org/10.1016/j.jretconser.2020.102129
- Song, X., Mo, Z., Liu, M. T., et al. (2022). Cooperator or supporter: how can cross-boundary Macau-Zhuhai metropolis promote regional tourism together? Asia Pacific Journal of Marketing and Logistics, 34(10), 2207-2236.
- Statista. (n.d.). Available online: https://www.statista.com/ (accessed on 13 September 2023).
- Sun, Y., & Wang, S. (2020). Understanding consumers' intentions to purchase green products in the social media marketing context. Asia pacific journal of marketing and logistics, 32(4), 860-878.
- VOSviewer. (n.d.). Available online: https://www.vosviewer.com/ (accessed on 13 September 2023).
- Wang, L., Chen, L., Li, C. (2024). Research on strategies for improving green product consumption sentiment from the perspective of big data. Journal of Retailing and Consumer Services, 79, 103802.
- Wang, S., Liu, M. T., Pérez, A. (2023). A bibliometric analysis of green marketing in marketing and related fields: From 1991 to 2021. Asia Pacific Journal of Marketing and Logistics, 35(8), 1857-1882.
- Webster, F. (1975). Determining the Characteristics of the Socially Conscious Consumer. Journal of Consumer Research, 2, 188–196. https://doi.org/10.1086/208631
- White, K., Habib, R., & Hardisty, D. J. (2019). How to SHIFT Consumer Behaviors to be More Sustainable: A Literature Review and Guiding Framework. Journal of Marketing, 83, 22–49. https://doi.org/10.1177/0022242919825649
- Xue, J., & Liu, M. T. (2023). Investigating the live streaming sales from the perspective of the ecosystem: the structures, processes and value flow. Asia Pacific Journal of Marketing and Logistics, 35(5), 1157-1186.
- Yan, D., Cai, X., Xie, M., Javeed, S., et al. (2022). Why is reusable bag consumption easier to say than do? Frontiers in Psychology, 13. https://doi.org/10.3389/fpsyg.2022.956998
- Zhao, W., Hu, F., Wang, J., et al. (2022). A Systematic Literature Review on Social Commerce: Assessing the Past and Guiding the Future. Electronic Commerce Research and Applications, 101219.

# Appendix

No.	Article	Prior Works	<b>Derivative Works</b>
(1)	Main Article 1: Against the Green: A Multi-method Examination of the Barriers to Green Consumption (Gleim et al., 2013)	9 articles	4 articles
(2)	Main Article 2: Investigating the Determinants and Barriers of Purchase Intention of Innovative New Products (Afzali and Ahmed, 2016)	6 articles	8 articles

Source: Scopus database (n.d.).

No.	Article	Variables	Construct Cluster/Wordcloud
(1)	The Socially Conscious Consumer (Anderson Jr. and Cunningham, 1972)	Social-variables	Social variable social spectral provide the second
(2)	Determining the Characteristics of the Socially Conscious Consumer (Webster Jr., 1975)	Consumer-social-socially	CONSCIENCES OF CARACTERISTIC CONSCIENCES OF C

Table A2. (Continued).	Table A2	. (Continued).
------------------------	----------	----------------

No.	Article	Variables	Construct Cluster/Wordcloud
(3)	Challenges of the "green imperative": a natural resource-based approach to the environmental orientation- business performance relationship (Menguc and Ozanne, 2005)	Environmental-neonatural	Construction of the state of th
(4)	Ecologically Concerned Consumers: Who are They? (Kinnear et al., 1974)	Concern-consumer-pollution	CONCEPT Consumer pollution concerned ecological consumers marketing high ecological yp harm index personality study appeals avoidance products measures social can journal low new scores variables consumption market one per dived under and and the social productors to be and the social can journal low new scores variables mosures social can journal low new scores variables on sumption market one per dived under and and the social can be store and the social can journal low new scores variables consumption market one per dived under standing assigned to be store and the social can journal low new scores variables and the social can journal low new scores variables redictors to be and your associated characteristics denied ducational public regulation reducts in the social can be stored to be social to a social public regulation reducts in the social can be socially the under standing assigned to be stored to be social to an output to be socially the under standing assigned to be social to an output to be stored to be socially the social to be social to an output to be social to an output to be stored to be socially the social to a social to a social to an output to be social to an output to be stored to be socially the social to a social to a social to an output to be socia
(5)	Corporate Social Responsibility, Customer Satisfaction, and Market Value (Luo and Bhattacharya, 2006)	Customer-satisfaction	CSC customer satisfaction value market marketing corporate journal firm firms quality product model innovativeness data stock firancial formed antilities may accurate marketing corporate journal firm firms quality product model innovativeness data stock firancial formed antilities may accurate marketing corporate product in the second stock formed antilities may accurate influence fight units for the second stock for ancient and the second stock accurate stock for the second stock for the second stock for the second stock accurate stock for the second stock for the seco

Keyword: barriers to green consumption. Source: Scopus database (n.d.).

No.	Article	Construct cluster/wordcloud
		Green-behavior-environmental Wordcloud:
		green behavior environmental
1)	Perceived Environmental Responsibilities and Green Buying Behavior: The Mediating Effect of Attitude (Chanda et al., 2023)	Crosseff buying consumers attitude perceived purchase study intention theory products consumer factors consumption sustainability model sustainable analysis concern product responses to the sustainability model sustainability response to wards good analysis to sustainability to the sustainability of the sustainability responses to the sustainability model sustainability response to the sustainability responses to the sustainability of the sustainability responses to the sustainability responses to the sustainability response to the sustai
		Sustainable-behavior-consumer Wordcloud:
		sustainablejournal
		behaviorconsumerself
		behaviors environmental can social al
2)	How to Shift Consumer Behaviors to be More Sustainable: A Literature Review and Guiding Framework (White et al., 2019)	Definition of the second secon

### Table A3. Derivative works articles, construct cluster and wordcloud.

# Table A3. (Continued).

No.	Article	Construct cluster/wordcloud
		Green-behavior-purchase-environmental-intention Wordcloud:
3)	Estimating green purchase behavior: an empirical study using integrated behavior model in Bangladesh (Siddique et al., 2020)	<section-header></section-header>
		Consumption-eco-friendly product-behavior Wordcloud: Consumptioneco
		friendlyproductsbehavior
4)	Consumption behavior of eco-friendly products and applications of ICT innovation (Joshi et al., 2021)	Support of the second secon

Keyword: barriers to green consumption. Source: Scopus database.

No.	Article	Construct cluster/wordcloud
		Time-use-system-behavior-beliefs-user <b>Wordcloud:</b>
1)	User Acceptance of Computer Technology: A Comparison of Two Theoretical Models (Davis et al., 1989)	saler indra attitude in people used social based students in people used social technology impact process generale asse items acceptance server erver invo energiese items acceptance influence Usefulness use an attitude in people used social usage systems measures factors influence Usefulness use time bi tra aigen using one analysis beliefs jstor well users although feb intentions expenses program perceiveds also fishbein writeon warsher of toward item perceiveds also fishbein writeon warsher general perceiveds also fishbein writeon warsher of toward item perceiveds also fishbein writeon warsher general perceiveds also fishbein writeon warsher downloaded bagozz end table decision otexaned relationsher within
		Consumer-resistance-innovation-risk <b>Wordcloud:</b>
2)	An Exploration of Consumer Resistance to Innovation and Its Antecedents (Kleijnen et al., 2009)	<pre>inter contract inter inte</pre>
		Theory-measurement-model <b>Wordcloud:</b>
3)	Evaluating Structural Equation Models with Unobservable Variables and Measurement Error (Fornell and Larcker, 1981)	fatter       rotical example         value matrices       rotical example         value matrices       rotical example         value matrices       value         value       constructs         value       onstructs         va

### **Table A4.** Prior works articles, construct cluster, and wordcloud.

Ta	ble	A4.	((	onti	nued	).
----	-----	-----	----	------	------	----

No.	Article	Construct cluster/wordcloud
		Behavior-control-intentions Wordcloud:
4)	The Theory of Planned Behavior (Ajzen, 1991)	we down and the second and the secon

Keyword: barriers of purchase intention Source: Scopus database (n.d.).

Table A5. Derivative works articles, construct cluster and wordcloud.



Determinants of Tourists' Site-Specific Environmentally
Responsible Behavior: An Eco-Sensitive Zone Perspective (A. Gupta et al., 2022)



# Table A5. (Continued).

No.	Article	Construct cluster/wordcloud	
		Consumption, reusable	
3)	Why is reusable bag consumption easier to say than do? (Yan et al., 2022)	<pre>vertices vertices vertice</pre>	
		Consumers-service-reasons-values-perceived	
)	Consumers' Reasons and Perceived Value Co-creation of Using Artificial Intelligence-enabled Travel Service Agents (Lalicic and Weismayer, 2021)	qualitative freesen model order analysis journal supta (heory westaby constructs comparative approach specific trust hours trust hours tru	

Keyword: barriers of purchase intention. Source: Scopus database (n.d.).